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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/291,387	04/14/1999	CHANG-HOI GU	678-256-(P87	2044

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EXAMINER

CHOW, CHARLES CHIANG

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/291,387

Applicant(s)
GU et al.

Examiner
Charles Chow

Art Unit
2684



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 14, 1999
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

Detailed Action

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Needham et al. (US 5,517,507).

Needham et al. discloses **claim 1**, a method of transmitting use data (user data message 201, 205, front figure, abstract) on a reverse common channel with a reverse dedicated channel release (the data message can be either the reverse or forward dedicated channel, such as the data messages 200 sent from base station to communication units 103 to 109, or may be sourced by a communication unit, col. 3, lines 46-48). Needham assumes the transmitting device can be the communication unit, and the receiving device could be the base station for the reverse dedicated channel (col. 3, lines 62-65) to provide the acceptable quality service using the notification via the energy-burst response (203 to 207) for the retransmission (title, front figure, abstract, Fig. 1 to Fig. 5-4).

Needham discloses the dividing user data into a plurality of segmented messages for user longer data into N frames, such as, (a) the frames 501 to 509 in col. 6, lines 40-48; (b) the data messages transmitted in multiple contiguous frames in col. 7, lines 49; (c) the transmitting a second data message in a second time window in col. 8, lines 52-55.

Needham discloses the transmitting of the segmented messages of consecutive frames on the (multiple continuously Nth frames, in above) on the reverse common channel (from communication unit to base station).

Needham discloses the determining whether a base station receives each of the segmented messages from (a) the notification of acknowledgement ACK to determining the whether received of each frame, and NACK for the response for retransmission, col. 1, lines 23-30; (b) the energy-burst response for the negative acknowledgement NACK to request for retransmission, col. 5, lines 51-64; (c) the indication of the energy burst for unacceptable quality, col. 8, line 25-29.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. in view of Honkasalo et al. (US 5,995,496).

In the above it does not include the power controlled channel.

Honkasalo teaches, **claim 2**, the power controlled channel for packet data transfer (title, claim 5, col. 12, line 56-63, the base station transmits the feedback-acknowledgement to adjust/control the transmission power of the terminal, to response the quality of the received

data). It is obviously a good feature to include in the system with the channel power control for transferring of quality data. By doing so, the data transferring error would be improved, due to the compensation of the signal fading in the transmission (col. 3, line 1-5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Honkasalo's closed loop acknowledgement for controlling the channel power, to Needham, such that the quality of the data transmission could be improved.

3. Claims 3-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. in view of Honkasalo, and further in view of Ayabe et al. (US 6,108,530).

Needham has shown above the multiple continuous frames in different time window for transmitting of the divided-long-data frames. However, it is not clearly enough for the sequence number, and indicating presence or absence of segments.

Ayabe et al. teaches, **claim 3**, a system for transmitting the divided-fragmented displayable message in between the base station (110-1, 110-3) and short-message entity (104, 105; col. 4, lines 34-47, col. 4, lines 48-60, uplink and downlink) as shown in front figure/abstract.

The fragmented-data packages are separately transmitted including a sequence number (reference-parameter indicating corresponding-position of the fragment abstract) to indicate the presence/absence in the succeeding frame (following fragment). The including of the referencing position information in the fragmented messages is such an apparent, essential, accurate, efficient, method of transmitting long-divided fragmented data to avoid the puzzle during re-assembling of the received data-fragments. Therefore, it would have been obvious

to one of ordinary skill in the art at the time of invention to modify and add Ayabe's referencing parameter to indicate the corresponding position of the fragments, to Needham above, such that message could be efficiently transferred.

Regarding **claim 4**, Needham has discloses the receiving of the response from base station indicating reception of each segmented message (col. 8, line 25-30, the receiving of acknowledgement for indicating reception of each frame, and providing the negatively-acknowledgement-energy burst, when received frames are in errors).

Regarding **claim 5**, Needham has disclosed the response message indicating reception of a particular segment (the energy bust response; col. 7, lines 65-67, the retransmitting only the particular messages which are not adequately received); Needham shows the sequence number above (referencing parameter for corresponding-position of the fragments).

the NACK (col. 5, line 51-64). the retransmit only the particular message not adequately received (col. 7, lines 65-76).

Regarding **claims 6, 7**, refer to examiner's comment in claim 5 above, which also provides the claimed features for this clam for the failed reception (NACK-energy-burst for request for retransmit).

Regarding **claim 8**, Needham has shown above the retransmitting of the particular frames not adequately received.

Regarding **claim 9**, Needham has shown above the whether a response indicating reception of retransmission (col. 5, lines 51-64, the as long as the negatively responded, again, for the retransmission).

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Regarding **claim 10**, Needham has shown above the predetermined time period (predetermined time window, in abstract, col. 5, line 32, col. 5, line 60, for the energy-burst responses 203, 206, 207, for the retransmission; the burst-energy response in time-window for each frame, col. 5, lines 29-36).

Regarding **claim 11**, Needham has shown above the response for last Nth frame, and burst-energy response in time-window for each frame (above in claim 10), and including the last frame having the burst-energy immediately after the last frame (col. 6, line 39-45).

Regarding **claim 12**, Needham has shown above the predetermined response time period, the response indicating reception of the last segment.

Regarding **claim 13**, Needham has shown above the retransmitting of the last frame (the last Nth frame); the response for the last segment; the not received (the energy-burst NACK retransmission); the predetermined time period (proper predetermined time window).

Regarding **claim 14**, Needham has shown above the base station transmitting a succeeding segment message base on the received response (energy-burst for each frame) indicating the reception of the last segment.

4. Claims 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Needham et al. in view of Honkasalo, and further in view of Ayabe et al.

In the above it does not include the checking a count of the more flag field, although in the above it has shown the flag field (the referencing position parameter for the fragments in the user data field for the indicating of more frames in the incoming message.

Ayabe teaches **claim 15**, the CRC in for the guarantee of the short message delivery, col. 5, lines 35-37). Ayabe teaches the checking a count of the more flag field (the referencing parameter indicating the total size the message, abstract; the reference position in above, the indicates of the identity in col. 2, line 49) for the more flag field. Besides, Ayabe also teaches the assembling, reconstructing, of the received fragments (col. 2, lines 51-67); the marks for ready for reassembly (col. 7, lines 28-29; the inserting any fragments received out of order (col. 9, lines 20-22). The referencing-position, the CRC, and the total size-count, are all obviously, essentially, apparently, a good technique for the transmitting/assembling of the fragmented data. By following the steps from Ayabe/Needham, the system could easily, efficiently transmits the long fragmented data to avoid the reassembly problem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify and add Ayabe's total size-count, to Needham above, such that the missing fragment could be efficiently located.

Regarding **claim 16**, refer to examiner's comment in claim 2 above, which also provides the claimed features for this claim for the power controlled channel.

Regarding **claim 17**, refer to examiner's comment in claim 4 above, which also provides the claimed features for this claim for the response from either base station or mobile station for sending response to indicate the reception.

Regarding **claim 18**, refer to examiner's comment in claims 3, 4 above, which also provides the claimed features for this claim for the response indicating reception; the sequence referencing position parameter.

Regarding **claim 19**, refer to examiner's comment in claim 8 above, which also

provides the claimed features for this claim for the predetermined time period (window) for not receiving (not adequately received, energy-burst NACK-retransmission request).

Regarding **claim 20**, refer to examiner's comment in claim 9 above, which also provides the claimed features for this claim for the mobile station response indicating retransmission (energy-burst, NACK-retransmission).

Regarding **claim 21**, refer to examiner's comment in claim 11 above, which also provides the claimed features for this claim for the response for receiving last message (Needham's col. 6, line 43-45, above).

Regarding **claim 22**, refer to examiner's comment in claims 1, 5 above, which also provides the claimed features for this claim for the error (unacceptable quality) and the request for retransmission.

Regarding **claim 23**, Ayabe has considered the completed continuously checking as shown above based upon the referencing position parameter, and the total size count parameters. Ayabe also teaches the assembling, reconstructing, of the received fragments (col. 2, lines 51-67); the marks for ready for reassembly (col. 7, lines 28-29); the inserting any fragments received out of order (col. 9, lines 20-22).

Conclusion

5. In the above discussion, Needham discloses the a method of transmitting data message either reverse, or forward channel in between the base station and the communication unit. Needham am assumes the transmitting device can be the communication unit, and the receiving device could be the base station for the reverse dedicated channel to provide the acceptable quality service using the notification via the energy-burst response for the retransmission. It shows the dividing user data into a plurality of segmented messages for user longer data into N frames; the data

messages transmitted in multiple contiguous frames; the transmitting a second data message in a second time window. It shows the determining of whether a base station receives each of the segmented messages from (a) the notification of acknowledgement ACK to determining the whether received of each frame, and NACK for the response for retransmission; (b) the energy-burst response for the negative acknowledgement NACK to request for retransmission; (c) the indication of the energy burst for unacceptable quality. Honkasalo teaches the closed loop acknowledgement for controlling the channel power. Ayabe teaches the referencing parameter to indicate the corresponding position of the fragments; the total size-count, the reassembling, reconstructing, of the received fragments.

6. The cited pertinent prior arts are listed below:

- A. US 5,485,463, Godoroja teaches the mobile station acknowledgement for transmitting paging signals, having the data fragments from the dividing of the long data into smaller fragments. The base station does acknowledge to mobile station's data transmission (abstract, front figure, Fig. 7-8, col. 7, lines 66 to col. 8, line 23).
- B. US 5,644,576, Bauchot et al. teaches the medium access control using a variable length interleaved frame for transmitting data for types A, B, C. The base station allocates the data slots in A, B period, and the duration and sequence of the periods may be varied for interleaving different types (abstract, front figure). All packet must be acknowledged either individually or as a group (col. 8, lines 4-7).
- C. JP 10,336,746, Miyazawa teaches the portable terminal transmits divided data continuously as blocks (title, novelty, abstract).
- D. US 6,240,083 B1, May 2001, Wright et al. teaches the channel access

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contention/reservation mode for transferring data packet. For long data packet size, request for reservation of the reverse channel transmission in the contention mode burst, and the base station acknowledgement of the received data packet to allow subscriber to submit retransmission (abstract, front figure).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Hunter, can be reached at (703)-308-6732.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

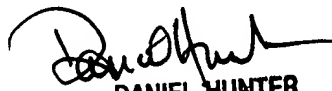
or faxed to: (703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow

April 10, 2002.


DANIEL HUNTER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600